

Title (en)
Electric power steering apparatus and voltage booster

Title (de)
Elektrische Servolenkung und Spannungsverstärker

Title (fr)
Direction assistée électrique et amplificateur de tension

Publication
EP 1632420 A2 20060308 (EN)

Application
EP 05018916 A 20050831

Priority
JP 2004254407 A 20040901

Abstract (en)
An electric power steering apparatus (1) includes a booster circuit (25) and a microcomputer (11). The booster circuit (25) includes a booster coil (27), a first FET (26a), and a second FET (26b). The booster coil (27) is connected to the first FET (26a), which is grounded. A node (a) between the booster coil (27) and the first FET (26a) is connected to the second FET (26b), which is connected to a drive circuit (12). The microcomputer (11) drives the first and second FETs (26a,26b) such that the first and second FETs (26a,26b) are selectively turned on and off, thereby controlling an output voltage of the booster circuit (25). When application of assisting force to a steering system is stopped, the microcomputer holds the second FETs (26a,26b) on until the output voltage of the booster circuit (25) becomes equal to a predetermined voltage.

IPC 8 full level
B62D 5/04 (2006.01); **B62D 6/00** (2006.01); **H02M 3/155** (2006.01); **H02P 6/06** (2006.01); **H02P 6/08** (2016.01); **H02P 6/12** (2006.01); **B62D 119/00** (2006.01)

CPC (source: EP US)
B62D 5/046 (2013.01 - EP US); **H02M 3/1588** (2013.01 - EP US); **H02P 6/10** (2013.01 - EP US); **H02P 6/18** (2013.01 - EP US); **Y02B 70/10** (2013.01 - EP US)

Citation (applicant)
JP 2003319700 A 20031107 - TOYODA MACHINE WORKS LTD

Cited by
EP2327605A1; EP2523329A3; US8954234B2

Designated contracting state (EPC)
DE FR GB

DOCDB simple family (publication)
EP 1632420 A2 20060308; **EP 1632420 A3 20060412**; **EP 1632420 B1 20071003**; DE 602005002704 D1 20071115; DE 602005002704 T2 20080717; DE 602005010569 D1 20081204; EP 1747972 A1 20070131; EP 1747972 B1 20081022; JP 2006069328 A 20060316; JP 4501599 B2 20100714; US 2006055351 A1 20060316; US 7129663 B2 20061031

DOCDB simple family (application)
EP 05018916 A 20050831; DE 602005002704 T 20050831; DE 602005010569 T 20050831; EP 06124212 A 20050831; JP 2004254407 A 20040901; US 21472605 A 20050831